

REMARKS

The present Amendment and Request for Reconsideration is filed in response to the Office Action mailed July 17, 2003, the period of response having been extended by two months to December 17, 2003.

Claims 1-16 and 55-59 are pending in the application. Claims 55-59 stand allowed.

In the Office Action, Claims 5 and 6 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In response, applicants have amended the claims to further clarify the subject matter regarded as the invention. It is believed that the amended claims are clear as to the requirements of the filters. It is therefore requested the Examiner withdraw the rejection. If the Examiner has any additional questions regarding these claims, he is invited to call applicants' attorney at the number listed below.

Claims 1, 2, 5, 6 and 15 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,293,911 to Imaizumi et al. Applicants respectfully traverse the rejection. In order to anticipate a claim, the cited reference must teach or suggest each and every element of the claimed invention. Applicants respectfully submit that the Imaizumi et al. reference does not disclose the claimed combination of elements including a camera with a beam splitter that divides light into two beams with the same spectrum and one or more filters that are positionable in front of a color image sensor for passing light in a desired wavelength band when the camera is operating in a fluorescence imaging mode.

As shown in Figure 1, the Imaizumi et al. reference discloses an imaging system including a dichroic mirror that directs infrared light towards an infrared image intensified camera 23, 24, 25 and the remaining light towards a white light image sensor 26, 27, 28. Imaizumi et al. discloses utilizing this imaging system for the detection of fluorescence at infrared wavelengths and white light. If, however, an imaging system of this architecture were

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used to detect fluorescence at visible wavelengths, as is done with the present invention, then the images produced by the white light sensor would not be truly white light images because the light received by the sensor would be missing the wavelengths diverted by the dichroic mirror. The imaging system of the present invention incorporates a beam splitter that divides the light into two beams with the same spectrum, so that the color image sensor produces a true white light image when operating in a white light imaging mode and a normalizing image when operating in a fluorescence imaging mode.

The normalizing image produced by the color image sensor depends upon the filters that are positioned in front of the color image sensor. If the filters positioned in front of the color image sensor pass a portion of the reference reflectance light, then the camera will operate in a fluorescence/reflectance mode. Alternatively, if the filters positioned in front of the color image sensor pass light in a second fluorescence spectral band, then the camera can be used in a fluorescence/fluorescence image mode. If the one or more filters (or lack of filters) pass all wavelengths, then the color image sensor produces white light images as specified on page 11, line 20-page 16, line 15 of the application.

Because the Imaizumi et al. reference does not teach or suggest each and every element as set forth in Claim 1, it is submitted that Claim 1 and the claims that depend thereon are allowable over the reference.

Claims 3, 5, 6 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Imaizumi et al. in view of Kazuhiro, U.S. Patent No. 6,280,378. Without agreeing with the rejection, applicants note that these claims depend from and further narrow Claim 1, which is believed to be allowable. Therefore, these claims are allowable for at least this reason.

In light of the above, it is believed that all pending claims are in condition for allowance. It is therefore requested that the Examiner withdraw the rejections and pass this case to issue at the earliest possible date.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid and addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date.

Date: December 17, 2003 Pamela H. Tucker

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